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ORIGINAL ARTICLES.

NEPHROPTOSIS—MOVABLE KIDNEY.[1]

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BY movable kidney, or nephroptosis, is meant a displacement downward of the organ, with more or less latitude of motion in any direction. Such a kidney is generally movable within its ordinary capsule or peritoneal investment, and cannot become a floating kidney which has a mesonephron and is a congenital malformation. The kidney is in some cases quite movable and yet adherent to its capsule, as will be found occasionally when operations are performed which develop this fact. A movable kidney will not always assume a position at the lowest point of a loose capsule, as we frequently experience difficulty in locating them when most wanted—as during a consultation. The erect position favors descent, however, and we can generally succeed in finding such a kidney below the ribs.

Some authors declare that a kidney must be displaced far below its normal site in order to be palpated, and that even this limited descent causes the well-known symptoms due to prolapse. It may be taken for granted that a kidney in its normal site in a thin subject can readily be felt or palpated over the lower half or third of its surface. The organ may descend to the pelvic brim, in fact often does, thus showing great mobility. Any change forward or downward of a kidney means displacement. To this, if mobility be added, we have the condition under consideration.

The writer has never seen a floating kidney, nor a movable kidney, whose lateral motion permitted it to reach beyond the median line. It is to the very movable cases only that the writer has given close attention, such as are supposed to need surgical treatment. The less movable cases are kept under the observation of the family physician, no operation being suggested save when positively and plainly indicated. Authors agree that many women who have neurasthenia, gastrointestinal atony, dyspepsia, etc., have nephroptosis. Some authors claim twenty-five per cent., and others even a higher rate for this class. There is but little truth in the claim that twenty-five per cent. of all women have this disease, if indeed it be a disease. It is true, however, that of the class mentioned above, from ten to twenty-five per cent. have some degree of mobility.

In this country, Edebohls of New York, and Johnston of Richmond, have the credit of first making a report of cases in number sufficient to test the advisibility, propriety, success, and permanence of operations looking toward a relief of this condition, as well as to cure the symptoms attributed to it. Dr. Osler has contributed interesting and indeed valuable clinical information, which may be found in his little book on abdominal tumors.

Frequency.—Edebohls says twenty-five per cent. of his female patients who have had pelvic disease have movable kidney. Other writers agree that a very large percentage of cases occur in persons apparently in good health. Lindner says one in six of the gynecological cases have movable kidney.

It is generally admitted that women are most frequently found to have movable kidney, although many observers have found it in men. It occurs in adults for the most part, between twenty and forty-five years of age. This period includes that period of a woman's life during which her diseases are watched and carefully studied by the obstetrician and gynecologist. Herein lies at least a possible explanation of the frequency at this period. Nephroptosis occurs often in thin subjects. The fat within the capsule has, to some extent, been absorbed. Obviously, fat subjects might have movable kidney, and the patient and physician be quite unaware of it.[1]

Pregnancy, pelvic disorders, and inflammations, abdominal tumors, absence of fat, have been

[1] Read before the Medical Society of the District of Columbia, Wednesday, March 18, 1896.

[1] The writer has never seen a movable kidney in a negress of dark color, and only once in a mulatto.

assigned as being closely related to the etiology of this disorder. The first case observed by the writer was relieved of symptoms due to the displacement during the latter months of pregnancy. It is highly improbable that tumors have much influence upon the mobility of a kidney, unless through pathological adhesions to the capsule. Neither does the writer think corset-wearing responsible for it. But we do find more cases occurring in women who have been the victims of pelvic disease, and according to some authors, of appendicitis. (Edebohls.) Most observers agree that the right kidney is most frequently misplaced on account of its position under the liver. The writer doubts this supposed influence of the liver.

Symptoms.—Anorexia has been present in most cases; actual vomiting in two cases. Pain is not a marked or characteristic symptom of movable kidney.[1] The only case observed by the writer in which pain actually existed had perinephritic disease. Other observers, however, mention severe pain as one of the prominent and most constant symptoms. The writer finds a satisfactory explanation of renal pain in such cases in tortion, or other temporary occlusion of the ureter, with consequent distention of the kidney. Courtin believes the pain due to pyelitis, and consequent nephritic colic. In one case, the writer found a displaced and movable kidney greatly enlarged from occlusion of the ureter by a calculus. So many patients have vague, indefinite, nervous, and dyspeptic sensations or symptoms, that it is not now thought possible to say any symptoms are pathognomonic. In the absence of a tumor it is impossible to say that such a condition exists. But those having given the subject careful attention, occasionally find explanation for various functional derangements of the vasomotor system, indigestion, gastralgia, or other epigastric or abdominal pain. All of my cases, including one in a male subject, had neurasthenic symptoms. One case may be mentioned to show how a patient can have peculiar, although in her case positive, symptoms enabling her to suspect the displacement of the kidney before its actual detection by the physician or herself. So closely related are the symptoms of displaced kidney to those of neurasthenia that a search for this abnormality is in every such case deemed important. Especially important is this in the absence of other explanation of neurasthenic symptoms. Given a neurasthenic, with emaciation, pelvic disease, such as ovarian or uterine inflammation, etc., we may expect to find many of these women with one or both kidneys movable. I am led to believe from experience in a recent case that epileptiform seizures may be exaggerated when the patient has a movable kidney. In one case, at least, the marked improvement following a nephrorrhaphy would justify the above statement.

Diagnosis.—A misplaced kidney is usually easy of detection, and its presence in a new position can be demonstrated. It is important to exclude distended gall-bladder or tumors of the liver, if the right kidney is in question. The spleen could not easily be mistaken for a kidney, unless enlarged or floating. Percussion is of but little value in locating a kidney anywhere, even in its normal position. Intestinal, omental, or pyloric tumors must all be considered, but, in each of these, concomitant symptoms will aid in the diagnosis. The characteristic and important test is the "slip," which all clinicians agree is pathognomonic. It is an available and pretty reliable test. It is obtained by bimanual palpation, one hand in the loin, the other on the abdomen. The pressure, beginning just under the rib, is continued downward. If the kidney is found, it may be felt to slide into place. When once felt it will always be remembered. The clinical history will often assist in the diagnosis, but we will often find an absence of definite symptoms here, while in organic diseases of the liver, spleen, or kidneys, we have what may be called definite, or positive, or objective symptoms. The writer has had difficulty in deciding between tumors of the gall-bladder, and misplaced and subsequently abnormally fixed kidney. Two cases present themselves to memory in which fixation occurred after the displacement downward of the right kidney. In one of these cases, now under observation, there is reason to suspect perinephritic inflammation, and tuberculosis is feared. A case will be reported hereafter in which the displaced kidney was greatly enlarged, its lower border reaching the iliac crest, due to temporary closure of the ureter. Finally in this, as in other diseases, mistakes have been made by competent observers. For instance, Mr. Tait once operated for gall-stone and found nothing abnormal. Dr. Baker of Auburn, N. Y., afterward cured the patient by a nephrorrhaphy. Mr. Tait declared the kidney was in its normal position.

Treatment.—Cases of movable kidney occurring in fairly healthy women (the displacement found by accident), may well go without surgical treatment, or be treated by a suitable bandage. I have but little personal experience with use of the

[1] Enteroptosis is in some cases responsible for descent of the kidney or kidneys with the intestines.

bandage in nephroptosis. The bandage is worn for a time, and then laid aside, or if it fails of its purpose, the patient may return for other treatment. It may be impossible, in fact it generally is impossible, to support a kidney by means of a bandage when it descends far below its normal position. However this may be, the writer would suggest a possibility of as much harm by pressure upon the intestine, as good or comfort from the bandage and necessary pad. On the other hand, if the patient is compelled to seek medical advice, having symptoms not otherwise clearly and satisfactorily explained, if she is emaciated and has one or both kidneys descending far below their usual position, it is possible that surgery may, and often does give as pronounced relief, and as much satisfaction to both patient and surgeon, as any other operation upon the abdominal organs (large tumors excepted). The writer desires to be clearly understood. We do not wish the operation to become as universal as trachelorrhaphy, or even as oöphorectomy, which required a vast, accumulated experience to stay the hands of men who did these operations upon the slightest pretext. Nephrorrhaphy—or nephropexy—in good hands, I believe to be a safe operation. It is, at least, comparatively so. While the very safety and convenience of this operation may make it possible that it be abused, we must not hesitate to make use of it in appropriate cases.

The writer has observed a large number of these cases during the past few years. Every observer who makes as careful examination of the abdominal as he does of the pelvic organs, will frequently find movable kidneys. That such careful examination is not *the rule*, we have every reason to believe. That clinicians invariably make careful search for disease or displacement of every organ is doubtful. That they often fail to detect a common misplacement of the uterus or kidney is absolutely certain. The condition under discussion is a case in point, for only a few years past can we say we knew much, or thought much, about "movable kidney." The failure to discover the condition lies in the hurried examination of patients, especially those in the dispensary. A patient must be undressed. She must have a flaccid abdomen and perfect quiet of mind and body if we would discover a movable kidney. The patient should be turned upon her side, or placed in the Trendelenburg, or the reverse position in some instances. Perhaps after repeated careful search by the physician, the patient may find the organ herself. In a case recently operated upon, the writer had trouble in finding the kidney when the patient was ready for operation. It had gone far up under the liver, and the patient had to be raised to the sitting position before it would come out of its hiding place. In this case the kidney moved from the diaphragm to the brim of the pelvis. Most important information is gained by operations which expose the kidney to view or the touch. In two of my cases, large distended kidneys became prolapsed and adherent. As already mentioned, one of these cases had a stone blocking the ureter. The enormous kidney filled the space between the rib and crest of the ilium. When the stone would shift from its position, a free discharge of urine would reduce the size greatly and give prompt relief. The kidney would then return nearly to its normal position. This patient waived operation until quite recently; she was subjected to nephrolithotomy in another city with fatal result. I have at present under observation a lady who had two large prolapsed kidneys. The left kidney was as large as a child's head, and far below its normal site. The enlargement was undoubtedly due to tortion or bending of the ureter. Nephrorrhaphy has cured this kidney. It was taken out of the fatty capsule, brought out of the wound, and carefully examined by sight and touch. Its vessels and pelvis, with a portion of the ureter, were palpated; then it was sutured to the wound, with entire relief of all symptoms, so far as that kidney is concerned. The right kidney will at an early day be likewise subjected to operation. In the half dozen or more cases operated upon by the writer, he has selected those cases actually in need of relief of symptoms. The patients were rewarded in every instance by the most pronounced relief. Never have more striking benefits been experienced from any operation than from nephrorrhaphy. The glow of health appears to return before the patient leaves her bed. In one case the patient gained nearly forty pounds in weight. Another patient was promptly relieved of vomiting and gastric distress, and gains in health and appearance. One patient, with two movable kidneys, sent me by Dr. Tompkins of Fredericksburg, Va., had one of them anchored with so much benefit that she writes to have the other kidney fixed. The only case thus far in which I have failed to have a perfect result, was sent be by Dr. Moran. She recovered nicely from the operation, gained immensely in weight, but had a recurrence, at least so reported. I am convinced that a perfected technic will secure better results hereafter.

Finally, and in conclusion, we recommend exploration, palpation, and inspection of certain

kidneys which have descended in the abdomen, because of added weight from distension, and when there is pus in the urine with a diagnosis of pyelitis.

CASE I.—Mrs. H., referred by Dr. Tompkins of Virginia.

Both kidneys movable, the right less than the left. Patient has pain in region of kidney; nausea, neurasthenia, neuralgia; she has chronic salpingitis, adhesions, etc. Operation May 27, 1895. The loin was opened, the kidney brought into the wound and secured by one large silk suture, including muscle, fascia, fibrous capsule, and about ⅜ inch of substance of the kidney. The fibrous capsule was opened up ½ inch wide and 2½ inches long on the peripheral margin of the kidney. The edges of the capsule were sewed to the muscular walls of the wound, the usual gauze packing applied, the wound closed by silkworm-gut sutures. Although the patient vomited almost unceasingly for five days, the kidney was firmly fixed when she recovered, and has given her no trouble since. Dr. Tompkins writes April 27th, that "she is doing remarkably well since you fixed her movable kidney. She has gained twenty-five pounds in weight and looks ten years younger."

CASE II.—Mrs. L., referred by Dr. J. F. Moran.

Had left nephroptosis. Right kidney anchored by another surgeon. I had previously operated upon this kidney through the abdomen. She has nervous and gastric symptoms. Operation June 27, 1895, at Columbia Hospital. The kidney fixed in the loin in a similar manner to that practised in the previous operation. Result, rapid convalescence and relief of symptoms. She gained about forty pounds in weight.

CASE III.—Mrs. A., referred by Dr. Richardson, Hyattsville, Md. Operation at Columbia Hospital.

Double nephroptosis. Kidneys fixed, painful, and greatly enlarged; the center of the tumors on a line midway between umbilicus and spine of ilium. This patient had hematuria, and operation was done on left kidney as a tentative measure of relief. Operation December, 1895. The kidney was found very adherent to its capsule. It was brought out of the wound and found to be of normal size. It was evident that the enlargement was due to tortion or bending of the ureter. She has had a perfect result; no further pain, no hematuria, no symptoms of disease on that side. Drs. Busey and Bowen of this city, have since carefully examined this lady. They unhesitatingly pronounce the operation a success, and advise similar treatment of the right kidney. The patient is willing for the second operation when it is my pleasure to perform it. Three deep silk sutures were used in this case to secure the kidney to the wound.

CASE IV.—Mrs. M., referred by Dr. Simpson, Manassas, Va.

Right nephroptosis. Gastric symptoms, neurasthenia. Tumor felt by patient, which greatly worried her. Kidney to pelvic brim, very movable. Operation at Columbia Hospital, March 4, 1896. Three deep silk sutures. Capsule sutured as before. Perfect result.

CASE V.—Mrs. L., referred by Dr. Sohon.

Right nephroptosis. Symptoms referable to stomach and nervous systems. Patient has petit mal. Operation January 20, 1896, at the residence of patient. Recovery uneventful and symptoms relieved. Two deep transverse, and two loop longitudinal sutures, the latter so placed as not to close the wound over the denuded surface. Iodiform gauze is placed between the wound surfaces down to the denuded surface of the kidney for four to six days, when it is withdrawn and the wound allowed to close.

CASE VI.—Mrs. G., referred by Dr. Walsh.

Has right nephroptosis; neurasthenia, nausea, vomiting, gastric distress. Operation advised by Drs. Walsh and S. C. Busey. Operation at private hospital April 23, 1896. Recovering from operation. Technic of operation same as one previous.

The six cases here reported comprise all operations with one exception. Case II had been operated in Chicago for right nephroptosis. I opened the abdomen to make a positive diagnosis and anchor the kidney. It was my first operation. The result was a return of the prolapse which the patient promptly recognized. She consented to the operation through the loin as noted above. She is reported to have experienced symptoms indicating a return, but it is not confirmed as yet. Of the three cases where the left kidney was movable, the right had been or was still movable. Of the operations on the right kidney, the patients had very slight or no displacement of the left organ.

FRACTURES OF BONES ENTERING INTO THE FORMATION OF THE ELBOW-JOINT.[1]

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FRACTURES of the bones entering into the formation of the elbow-joint may be confined to anyone of the bones that go to form this articulation, or it may involve all of them simultaneously. Thus, it may be limited to the lower extremity of the humerus, involving the external or internal epicondyle. Though Agnew says there are no well authenticated cases of fracture of the external epicondyle, Grainger, in 1818,

[1] Read before the Tennessee State Medical Society at Chattanooga, Tenn., April 14, 1896.

described a case of fracture in this locality. Should a single fracture occur on either side of the lower extremity of the humerus, extending from just above the condylar projection obliquely downward into the joint and displacing more or less of the articular surface of the bone with the condyle, there is presented what Holmes describes as a fracture of the outer or inner condyle of the humerus. According to Malgaigne, fracture of the outer condyle is the more common. He is substantiated by Hamilton and Agnew. On the other hand, Desault, who first described it, says fracture of the inner condyle of the humerus is the more common. He is corroborated by Sir Charles Bell, Sir Astley Cooper, South, and Holmes. Again, there may be a fracture through the base of the condyle known as supra-condyloid, or it may be limited to a splitting of the condyles, forming an inter-condyloid fracture; sometimes supra-condyloid is complicated with a fracture between the condyles, constituting what Ashhurst calls a T fracture.

On the other hand, the injury may be limited to one or both bones of the forearm. If the upper extremity of the radius is the seat of injury, the fracture may be limited to the head of the bone, chipping off a portion of its circumference or splitting it through the middle. Injuries of the head of the radius are likely to be associated with injuries to some of the other bones forming the elbow-joint. Holmes says, should it occur before puberty it is more apt to be a separation of the epiphysis. Again, fracture of the upper extremity of the radius is sometimes limited to the neck of the bone. That this fracture is rare, should be inferred by the differences of opinion among celebrated authors. Malgaigne thinks it uncommon; Mr. South says it is common; Sir Astley Cooper denied the existence of such a fracture; Hamilton is not convinced that it occurs, and Agnew says, "There are not more than one or two cases of such a fracture—verified by *post-mortem* examination—in existence." One of them is in the Mütter collection, belonging to the College of Physicians of Philadelphia. The writer has met with one case of fracture of the neck of the radius occurring in a woman, and reported in a paper read before the East Tennessee Medical Society at Knoxville, Tenn., May 24, 1894, which paper subsequently appeared in the *University Medical Magazine* for January, 1895. Agnew's table[1] shows "that of 648 cases of fracture of the radius treated at the Pennsylvania Hospital in Philadelphia, 24 were in the upper third, 53 in the middle third, and 571 in the lower third. In 542 instances the side was mentioned; 278 were on the right side, and 264 were on the left side. And in 777 recorded cases of the same injury, 477 were in males and 300 in females. Of this number, 733 were single; 21 compound; 10 compound comminuted; 6 single comminuted, and 7 not determined.

Fracture of the coronoid process of the ulna is, according to the "American Text-book of Surgery," almost unknown, except as a complication of dislocation of the elbow backward. This coincides with the observation of Holmes, who further states that it may occur without this complication. Holmes met with but three or four specimens, and recorded *post-mortem* examinations: one in the museum of Guy's Hospital, another in a man killed by a fall at St. George's Hospital, in whom both coronoid processes were fractured, and the two bones of the forearm dislocated backward on both sides, and the heads of the radii were split longitudinally. Hamilton collected twelve cases of fracture of the coronoid process. Of these, Sir Astley Cooper found one in the dissecting-room of St. Thomas' Hospital. Sam Cooper described one in the University College Museum. Velpeau reported one. The late Chas. Bell Gibson one. Lotzbeck of Munich, reported five, and Leo, three. Agnew is very doubtful if this injury ever occurs, having never met with it in his half century of practice. His tables show that of 133 fractures of the ulna admitted into the Pennsylvania Hospital, only three or four are noted as fractures of the coronoid process.

The writer has met with one case of fracture of the ulna, in the private dissecting-room of the Tennessee Medical College, without dislocation of any of the bones of the elbow or rupture of its ligaments. It was, however, complicated with a partial fracture of the external condyle of the humerus and splitting of the outer third of the circumference of the head of the radius, which can be seen in the accompanying plate. The subject, in which this accident occurred, had a fall from a bridge and sustained other injuries from which he died. In addition to the fracture of the bones of the elbow, he had fractures of the scaphoid, semilunar, os magnum of the carpus of the right hand, and also of the right ischium.

The causes leading to fractures of the bones entering into the formation of the elbow-joint may be direct or indirect violence, or to muscular action, as when applied to either epicondyle or olecranon process. When more than one bone

[1] Agnew, vol. i, p. 897.

is fractured, the cause is due to crushing forces applied from without, or perhaps furnished by the body of the individual—as falling from some high point and striking a hard object with the elbow, the weight of the body crushing the bones beneath.

The diagnosis of fracture of any of the bones at the elbow, theoretically, is comparatively simple, yet practically offers certain difficulties, due in a measure to the anatomical structures surrounding it, and again, to the distance from

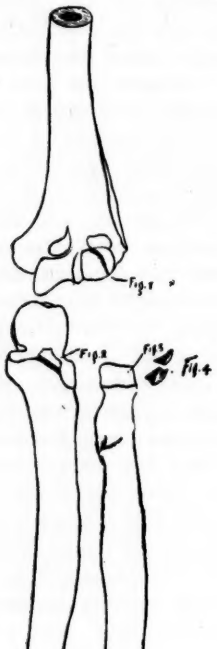

Illustration showing fractures of the bones of the left elbow-joint as found in a cadaver at the Tennessee Medical College. There was no luxation of the bones, or rupture of any of the ligaments.
Fig. 1: Shows line of fracture through the radial head of humerus. Fig. 2: Fracture of coronoid process of ulna. Fig. 3: Fracture of outer third of circumference of head of radius. Fig. 4: Fragments of head of radius.

the surface of some parts of the bones entering into the formation of this joint—as in the coronoid process of the ulna and in the case of the radius —its neck. The diagnosis of injuries in this situation when of the condyles of the humerus, and not complicated by luxation of the bones of the forearm, if seen before there is much swelling, can be differentiated by grasping the condyles between the fingers and rubbing them to and fro. The condyles may be somewhat wider on the injured side than on the sound side. Should the fracture extend through the base of the condyles, there is in addition to the crepitus and preternatural mobility, shortening. When the olecranon process is fractured, there is gaping between the fractured process and shaft of the bone. There is not always the complete loss of power of extending the forearm as the books describe. Should the coronoid process of the ulna sustain a fracture, authors do not give any positive opinion as to the diagnosis, except at necropsy, though it might be felt in thin subjects and on firm pressure as a loose body in front of the joint. On the other hand, if the upper extremity of the radius is fractured, the close proximity of its head to the surface, offers the surgeon a better opportunity for manipulation; since by pressing upon the head of the radius with the thumb of one hand and grasping the hand of the patient with his other, he can, by pronation and supination, tell with a fair degree of certainty, provided the other symptoms of fracture be present, whether the head or the neck of the bone is the seat of injury.

The treatment of the fractures of the different bones entering into the formation of the elbow-joint will have to be met according to the exigencies of the individual case. If simple, and seen before there is much tumefaction, and involving the lower extremity of the humerus, the application of the roller bandage and an internal rectangular splint may be applied; or an anterior angular splint, well padded with a cap for the posterior surface of the elbow, is good. If the olecranon is fractured, the object is to keep the fragment in contact with the shaft of the ulna, which can be done by means of compresses with adhesive strips, fortified by figure-of-eight turns of the roller bandage, and by keeping the arm extended by means of a straight splint applied to the anterior surface of the arm and forearm. In case of simple fracture of the upper extremity of the radius, it is not always possible to treat the injury with internal angular splint, as recommended by Ashhurst. Then the surgeon is justified in using the plaster-of-Paris, keeping the forearm midway between pronation and supination. When there is a single fracture of the coronoid process of ulna, the application of a compress and binding the forearm to an anterior rectangular splint, is spoken of by authors. Should the trauma be of such a nature as to permanently injure the structures of the joint, as often happens in com-

pound fractures forming a liability to anchylosis, the arm should be placed in a position the most useful, which is nearly a right angle. In order to overcome the tendency to anchylosis, which so often obtains in fractures to any of the bones at the elbow-joint, it is well that the surgeon commence passive motion before the adhesions have undergone organization. Some surgeons recommend it as early as twelve days, while others say to wait two or three weeks.

A RESUME OF TEN MONTHS' OF VAGINAL WORK.[1]

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THE principle that beaten paths are easier to follow than untried ways applies as well in surgery as in other walks of life. The abdominal route had become the one so often taken in attacking disease of the pelvic organs that the mere suggestion of using the vaginal route for this purpose seemed not only unnatural, but unwise.

Why leave methods which, in the hands of all of us, had not only proven themselves valuable, but seemed well-nigh perfect, for new methods, which all admit are as yet more difficult for the operator, and the technic of which still needs to be perfected? Would we not meet with hemorrhage, which we would be unable to control with any certainty? Would we not encounter other almost unsurmountable difficulties? These and many other misgivings haunted me when, on March 2, 1895, encouraged by the reports of other vaginal operators, I decided to convince myself of the value or defects of the vaginal route for removing diseased conditions of the pelvic organs.

Four features of the vaginal work impressed themselves upon me as having, in theory at least, advantages over the abdominal, and induced me to try the method:

1. Pus from ruptured pus-tubes and ovarian abscesses would flow downhill and away from the intestines, thus lessening the chances of sepsis.

2. The abdominal incision, with its tendency to hernia and unsightly scar, would be avoided.

3. Handling of the intestines would be lessened, and consequently intestinal adhesions would be few.

4. As another result of lessened handling of the intestines, shock would be diminished.

The object of this paper is to review carefully the writer's vaginal work of the past ten months, and ascertain whether the above anticipated advantages have been borne out in practice.

Whenever it has been possible to leave in the pelvis a comparatively healthy tube and ovary, or an ovary and a healthy portion of a tube, or even a health portion of an ovary, this procedure has been adopted, so that in a large proportion of the cases the uterus and one appendage, wholly or in part, have been left. During this period, from March 1, 1895, to January 1, 1896, my vaginal and abdominal sections have been equal in number, viz., fifty-five vaginal and fifty-five abdominal. In the fifty-five vaginal sections, both appendages were removed in only thirteen cases; and in three of these cases, in spite of the fact that both appendages were diseased and were removed, the uterus appeared to be so healthy that, after curettage and drainage, it was left in the pelvis. In cases where both appendages were removed, and the uterus showed marked endometritis, or the salpingitis involved the interstitial portion of the tube, the uterus was removed also. This was done in ten of the fifty-five cases. In reviewing his work, the conscientious surgeon is lead to ask himself whether he would do the same, were he to operate on the case again; in other words, has he any regrets? Of these fifty-five cases, which include all the vaginal sections, for all indications, done by the writer during the ten months above-mentioned, four have died.

One, Case XIV of the series was for *carcinoma uteri*, in which the disease had extended beyond the uterus—a case in which the radical operation should not have been attempted.

The second, Case XII, was one of puerperal septicemia, in which the uterus was removed, in the vain hope of getting beyond the septic process.

The third, Case XXII, was that of a large pelvic abscess in a patient very weak and septic, in whom one pocket of pus was opened and drained through the vagina, July 19th. Temperature and pulse came down, and patient improved, but on July 23d temperature and pulse rose again, and on July 26th patient was etherized, with a view of finding and opening, through the vagina, another pus-cavity. During the bimanual examination, and before any instruments were used, a large collection of pus escaped into the rectum. The patient was at once put to bed in fair condition, but died the next morning.

The fourth death can be justly assigned to the vaginal section, and seems to me the only one of the four which comes in competition with the abdominal operation. This was Case VII, in my list of vaginal sections. Mrs. L., suffering with double pyosalpinx, was operated on by me April 23, 1895. Both pus-tubes were removed, also the right ovary. The left ovary seemed healthy, and

[1] Candidate's paper presented for admission to the Am. Gynec. Soc., May, 1896.

was not removed; neither was the uterus. The patient died of sepsis, April 29th.

I have thought much over this case, and have wondered if the result would have been the same had the operation been performed from above. The pus-sacs ruptured in removal, and some pus escaped. The same thing would undoubtedly have occurred in the suprapubic operation. The pelvis was drained, and undoubtedly much better drained than it would have been from above. The case died, but, in the judgment of the writer, the same operation, if performed from above, would have brought the same result. Had the uterus been removed *per vaginam* at the same time with the tubes, the result would probably have been different.

Something should be said regarding the complications of vaginal section. Rectal fistulæ are rather more common after the vaginal operation than after the abdominal. One reason for this is, perhaps, the fact that our touch has not been as well educated in the feel of the pelvic organs from below as from above.

The technic of opening the peritoneum, without injuring the intestine, has not been as long practised or as well perfected below as above. Experience and practice will improve this. The spontaneous results, however, of fecal fistulæ occurring in the vaginal operation are much superior to those in the abdominal.

It has been my misfortune to have had five fecal fistulas. In three, however, there was a previous communication of an abscess with the rectum. The only one which did not close spontaneously was in Case XL, who had an abscess previously communicating with the rectum, and in whom the operation was begun *per vaginam* and finished from above; the uterus not being removed. This fistula had to be closed by operation three months later.

In the other four cases, the fistulas closed spontaneously; the first in sixteen days; the second in seven; the third in fifteen; the fourth in twenty-four, an average of fifteen and a half days. Rectal fistulas seem to close more readily when the uterus is removed than when it is left; also in those cases where the opening in the rectum is farther from the vagina, so that a longer granulating and contracting canal results, close, in the experience of the writer, more readily than those nearer the vagina.

One of the early objections raised to the vaginal method, is that the vagina does not furnish sufficient room for the work. Of course, additional room may easily be obtained by incising the perineum on either side, but that one soon becomes accustomed to the space furnished by the retracted vagina, is shown by the fact, that in only three of the fifty-five cases, was it found necessary to enlarge the space by incision.

The popular method at the present time for controlling hemorrhage and the pedicles, seems to be by the use of clamps, left on about forty-eight hours. Save in exceptional cases this does not appeal to me as the best method. Certainly, the patient is more comfortable when ligatures are used instead of clamps, and the sloughing is less. My own rule is to make use of clamps temporarily if at any stage in the operation they seem more convenient, but to use ligatures chiefly, and with certain rare exceptions, where the uterus is large and fixed, and the broad ligaments are markedly infiltrated, replace the clamps by ligatures before removing the patient from the table. If clamps are necessary, use as few as possible. In only four of the fifty-five cases have I left on clamps. Catgut has been my only ligature material. The cases which seem to me best fitted for the use of clamps are the puerperal cases.

The only vesical fistula which has occurred in the above series was in Case XXV, where, in an extensive epithelioma of the cervix, involving in one place the vesico-vaginal septum, a portion of the bladder was intentionally removed in order to get beyond the disease. This fistula was closed by operation some months later.

Of these 110 cases operated on by me during the last ten months of 1895, nearly all the pus cases were done *per vaginam*; in fact only four were operated on through the abdomen.

Comparison of the fifty-five vaginal with the fifty-five abdominal operations, done during the same time, although, at first thought, furnishing a rational criterion of the two operations, on further consideration does not seem the wisest plan, as the cases were so dissimilar, the vaginal operations being mostly suppurative cases, the abdominal mostly non-suppurative. The plan selected for comparison has been to table twelve cases of inflammatory disease of the appendages, selected in order of date of operation *per vaginam*, and compare them with twelve cases as nearly like them as possible, operated on through the abdomen during the year previous. These cases were taken in the order of date of operation, and the only guiding principle in their selection was to have them as similar to the vaginal cases as possible. They were diseased appendages with adhesions, chiefly pus-tubes.

It has been argued by the opponents of vaginal work that it requires a much longer time than the abdominal operation. These twenty-four cases taken for comparison were operated upon at the Roosevelt Hospital, where the time of each operation is noted. The average time in the twelve abdominal cases was 46 minutes and 5 seconds. The average time in the twelve vaginal cases was 40 minutes and 25 seconds; a gain over the abdominal route of 5 minutes and 40 seconds.

Let us now consider the four supposed advantages of the vaginal route, which were presented at the beginning of this paper, and see if experience has shown them real or fancied.

1. *Sepsis.*—Pus-sacs which have ruptured in removal have certainly discharged their leakage downward, and with less soiling of the intestines than would have been possible in the abdominal operation. Moreover, as we shall soon show from the temperature, pulse, and progress of the case after operation, there has been less sepsis.

In the twelve vaginal cases and twelve similar abdominal cases, which were taken for comparison, there were noted the highest pulse after operation, the number of days the pulse remained above 100°, the highest temperature after operation, and the number of days the temperature remained above 100°. The averages were taken and are as follows:

Vaginal cases: Highest pulse, 108½; pulse above 100, 1½ days; highest temperature, 100.8°; temperature above 100°, 2⅔ days.

Abdominal cases: Highest pulse, 114$\frac{5}{12}$; pulse above 100, 2$\frac{1}{6}$ days; highest temperature, 101.4°; temperature above 100°, 3$\frac{5}{6}$ days.

Difference in favor of vaginal route: In highest pulse, 5$\frac{1}{12}$; in pulse above 100, $\frac{3}{3}$ day; in highest temperature, .6°; in temperature above 100°, 1$\frac{1}{6}$ day.

2. *Hernia.*—During the month of January, 1896, a large proportion of the fifty-five vaginal cases have been examined, and in none of them did I find a hernia, although they were examined with that in view.

3. *Intestinal adhesions.*—The two symptoms which would seem to indicate intestinal adhesions are abdominal pain and difficulty in moving the bowels. In my experience both of these have been less in the vaginal than in the abdominal operation.

4. *Shock.*—Perhaps the best way to reach a conclusion regarding the relative shock in the two methods of operation, is to compare the highest pulse-rate in the first twenty-four hours in the two series of twelve similar cases.

In the vaginal cases, the average highest pulse in the first twenty-four hours was 102¾; in the abdominal cases, 110. A difference of 7¼ in favor of the vaginal route.

Let me say, in conclusion, that in my vaginal work, I have found hemorrhage under control, and obstacles easily surmountable.

SPONGE GRAFTING IN THE ORBIT FOR SUPPORT OF ARTIFICIAL EYE.[1]

BY E. OLIVER BELT, M.D.,
OF WASHINGTON, D. C.

To a skilled oculist, the ordinary enucleation of an eyeball is one of the simplest operations he is called upon to perform, and yet there are some cases in which so much of the conjunctiva is destroyed by careless or ignorant operators, that it is impossible for an artificial eye to be worn afterward. This is very annoying to a patient, and we cannot blame him if he never forgives the doctor who has so afflicted him. Such cases emphasize the fact that it is the duty of the surgeon not only to operate skilfully for the immediate relief desired, but he should do everything in his power to prevent disfigurement, and when an organ or limb cannot be restored to usefulness, he should at least obtain the best cosmetic results possible. After an eyeball has been removed, and an artificial eye inserted, very frequently it is not as prominent as the good eye. It has a *sunken appearance*, which attracts attention at once to the fact that the eye is artificial. To remedy this defect has been a problem for ophthalmologists for years.

One of the most satisfactory operations heretofore practised is that known as Mule's operation, which consists in the evisceration of the contents of the eye, and the insertion of a hollow glass globe in the sclerotic, which is sewed in. This proved fairly satisfactory, but there is some danger of the globe being broken, and occasionally the stitches come out and the globe escapes. There is also the risk of sympathetic ophthalmia where the entire eyeball is not removed. To obviate these difficulties and at the same time secure a full orbit, I have devised a method of sponge grafting which seems to meet the requirements without the disadvantages of other methods.

The operation is a simple one, and is performed as follows: The eyeball is removed by the ordinary method under strict asepsis. After all hemorrhage is arrested, the socket is washed out with

[1] Read before the Medical Society of the District of Columbia, June 3, 1896.

formalin solution, 1–1000, followed by sterilized salt solution. A globe of fine, soft, sponge about three-fourths the size of the eyeball (previously sterilized in five per cent. formalin solution and rinsed in the salt solution), is then inserted into the socket, or capsule of tenon. The conjunctiva is brought together and sewed with rat-tail sutures. The eyelids are then closed with compress and bandage. In a few weeks the sponge is filled with new tissue, which in time becomes firm, solid flesh, making a full orbit and a fine support for the artificial eye. The sponge fibers are apparently absorbed.

I have performed this operation in five cases with fairly good results in all, but union of the conjunctiva has not been firm enough to prevent some of the stitches from breaking or cutting out and the wound gaping. In future cases, to relieve this strain on the conjunctiva and to obtain good motion of the eye, I think of uniting the opposing recti muscles with rat-tail sutures, and then the conjunctiva over that by the purse-string or subcutaneous suture. By this method we should get union by first intention, good motion of the stump, and a full orbit. There seems to be no danger from infection of the sponge, for in two cases the eye was removed for panophthalmitis. Not only has this operation advantages over other methods in recent cases, but in old cases in which the eye was removed months or years ago, when there is this sunken appearance of the artificial eye, the socket might be reopened and a sponge inserted.

Since making my investigations, I find that Professor D. J. Hamilton of Edinburgh, practised sponge grafting for old ulcers in 1880, since which time a few other physicians have tried it in fresh wounds, and some other similar conditions that skin-grafting had been used in. However, I cannot find in all the medical literature in the library of the surgeon-general's office any mention of sponge being used as I have suggested and tried.

SURGEON LIEUTENANT-COLONEL LAWRIE thus describes in the *Lancet* the use of mercuric chlorid in treatment of hydrocele: "The sac is punctured in the usual way, and when about one-third or one-half of the fluid has been withdrawn, two drams of a saturated solution of bichlorid of mercury in glycerin are injected and mixed with that which remains, and allowed to rest in the sac for from half a minute to a minute. The whole of the fluid is then drawn off to the last drop. Very little pain is experienced, and, unless the patient is nervous or takes chloroform, he is able to move about immediately after the operation."

CLINICAL MEMORANDA.

THE COMPARATIVE VALUES OF HOMATROPIN AND ATROPIN AS MYDRIATICS.

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INSTRUCTOR IN DISEASES OF THE EYE IN THE PHILADELPHIA POLYCLINIC.

ALTHOUGH the action of homatropin hydrobromate upon the eye has been carefully studied since 1881,[1] its reliability as a mydriatic is doubted by many ophthalmologists. In order to test the relative values of homatropin and atropin, I refracted the following cases, at the suggestion of Drs. Jackson and de Schweinitz, in their clinics at the Philadelphia Polyclinic.

Homatropin was first used, and while the eyes were yet under the influence of this drug, atropin was instilled thus producing a continuous mydriasis and allowing the atropin to act upon a ciliary muscle which was already paralyzed as much as homatropin was capable of producing this condition.

The use of the homatropin was not trusted to the patient, but the instillations were made by myself at the clinic. The strength of the solution used was gr. 1 to 40 minims of water. Six drops of this were used at intervals of five minutes, one hour before the test was made. The condition of the refraction was then measured by skiascopy and subjectively at the test case; and the same procedures were employed to ascertain whether any accommodation was present. The cases were selected only to the extent of excluding those patients who were not sufficiently intelligent to respond to the subjective tests. The ages of the patients ranged from eleven to thirty-nine years.

As soon as the refraction under homatropin was completed, the patient was given a solution of sulphate of atropin, gr. ss. to fl. ʒ j, with directions to use one drop in each eye three times daily, and to return to the clinic after a two days' use of the drops. The second refraction was then done.

The homatropin and the atropin used were from Merck's laboratory.

Conclusions: The table shows that the atropin confirmed the measurement made under homatropin; that it failed to reveal any error of refraction which the homatropin had not already uncovered, and that if homatropin be properly used it is a reliable mydriatic.

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[1] "The Value of Homatropin Hydrobromate in Ophthalmic Practice." S. D. Risley, M.D., *American Journal of the Medical Sciences*, January, 1881, p. 113.
"The Comparative Action of Hydrobromate of Homatropin and of Sulphate of Atropia upon the Iris and Ciliary Muscle." C. A. Oliver, M.D., *American Journal of the Medical Sciences*, July, 1881, p. 150.
"Comparative Investigations into the Effects of Atropin, Duboisin, and Homatropin." H. Schaeffer, M.D., *Archives of Ophthalmology*, November, 1881, p. 196.
"Homatropin Hydrobromate." Edward Jackson, M.D., MEDICAL NEWS, July, 1886, p. 88.
"A Contribution to the Physiological Action of Hydrobromate of Homatropin with a Summary of its Action on the Eye." Geo. E. de Schweinitz, M.D., and H. A. Hare, M.D., THE MEDICAL NEWS, December, 1887, p. 173.

No.	Age.	Refraction under Homatropin Hydrobromate.	Under Atropin Sulphate.
1	16	O. D. +1.25 D. Sph. = 6/v	The same
		O. S. +1.25 " " ⊃+0.37 D. cy. ax. 90° = 6/v	" "
2	23	O. D. +1.25 " " ⊃+0.37 " " 90° = 6/vii	" "
		O. S. +1.50 " " ⊃+0.50 " " 90° = 6/vii	" "
3	21	O. D. +2.50 " " = 6/vi	" "
		O. S. +2.50 " " = 6/vi	" "
4	35	O. D. +1.50 " " = 6/vi	" "
		O. S. +1.25 " " ⊃+0.25 " " 90° = 6/vi	" "
5	28	O. D. +0.75 " " ⊃+0.50 " " 180° = 6/v	" "
		O. S. +0.50 " " ⊃+0.75 " " 180° = 6/v	" "
6	19	O. D. +0.75 " " = 6/vi	" "
		O. S. +1. " " 6/vi	" "
7	18	O. D. +1.50 " " ⊃+0.75 " " 90° = 6/vi	" "
		O. S. +1.25 " " ⊃+1.25 " " 90° = 6/v	" "
8	17	O. D. +1.50 " " ⊃+1.25 " " 60° = 6/viii	" "
		O. S. +1.75 " " ⊃+4.50 " " 20° = 6/xv	" "
9	13	O. D. +1.50 " " ⊃+1. " " 90° = 6/viii	" "
		O. S. +7. = 6/xv	" "
10	24	O. D. +1.75 " " = 6/viii	" "
		O. S. +0.75 " " ⊃+3.50 " " 90° = 6/viii	" "
11	20	O. D. +0.25 " " ⊃+0.37 " " 90° = 6/v	" "
		O. S. +0.25 " " ⊃+0.50 " " 90° = 6/v	" "
12	23	O. D. +1.25 " " ⊃+0.50 " " 90° = 6/vi	" "
		O. S. +1.75 " " ⊃+0.50 " " 90° = 6/vi	" "
13	17	O. D. +1. " " ⊃+0.25 " " 90° = 6/vi	" "
		O. S. −1.25 " " ⊃+4. " " 120° = 6/viii	" "
14	15	O. D. +0.25 " " ⊃+0.25 " " 90° = 6/vi	" "
		O. S. +0.50 " " ⊃+0.25 " " 50° = 6/vi	" "
15	32	O. D. +1.50 " " ⊃+1.25 " " 90° = 6/v	" "
		O. S. +1.50 " " ⊃+0.75 " " 90° = 6/v	" "
16	18	O. D. +4.75 " " = 6/v	" "
		O. S. +4.50 " " = 6/v	" "
17	39	O. D. +3.50 " " ⊃+0.25 " " 90° = 6/vi	" "
		O. S. +4. " " = 6/xxi	" "
18	34	O. D. −12. " " 6/xv	" "
		O. S. −7. " " ⊃−2. " " 170° = 6/ix	" "
19	32	O. D. +0.25 D. Sph. ⊃+0.50 D. cy. ax. 90° = 6/vi	The same
		O. S. +0.25 " " ⊃+0.75 " " 90° = 6/v	" "
20	32	O. D. +0.50 " " ⊃+0.75 " " 110° = 6/vi	" "
		O. S. +0.75 " " ⊃+2.25 " " 70° = 6/vi	" "
21	21	O. D. −0.50 " " ⊃+3.25 " " 90° = 6/vi	" "
		O. S. −0.50 " " ⊃+3.50 " " 90° = 6/vi	" "
22	16	O. D. +2.25 " " ⊃+0.25 " " 90° = 6/v	" "
		O. S. +2. " " ⊃+0.25 " " 90° = 6/v	" "
23	14	O. D. +1. " " ⊃+0.75 " " 90° = 6/vi	" "
		O. S. +1.25 " " 6/vi	" "
24	16	O. D. +0.75 " " ⊃+0.25 " " 90° = 6/vi	" "
		O. S. +0.75 " " ⊃+0.25 " " 90° = 6/vi	" "
25	18	O. D. +0.50 " " ⊃+0.62 " " 180° = 6/vi	" "
		O. S. +0.50 " " ⊃+0.87 " " 180° = 6/vi	" "
26	19	O. D. +0.25 " " 180° = 6/vi	" "
		O. S. +0.25 " " = 6/vi	" "
27	16	O. D. +2.75 " " ⊃+0.50 " " 90° = 6/vi	" "
		O. S. +2.50 " " ⊃+0.37 " " 90° = 6/vi	" "
28	13	O. D. +5.50 " " ⊃+0.50 " " 105° = 6/viii	" "
		O. S. +5.50 " " ⊃+0.50 " " 75° = 6/viii	" "
29	19	O. D. +1.25 " " ⊃+0.75 " " 90° = 6/vi	" "
		O. S. +1.50 " " ⊃+0.75 " " 75° = 6/vi	" "
30	17	O. D. +0.50 " " ⊃+0.25 " " 90° = 6/vi	" "
		O. S. +0.50 " " ⊃+0.50 " " 90° = 6/vi	" "
31	17	O. D. +1.50 " " ⊃+0.75 " " 90° − 6/vi	" "
		O. S. +0.75 " " ⊃+0.50 " " 90° = 6/vi	" "
32	22	O. D. +1. " " = 6/vi	" "
		O. S. +0.75 " " ⊃+0.50 " " 105° = 6/vi	" "
33	23	O. D. +0.25 " " = 6/vi	" "
		O. S. +0.25 " " = 6/vi	" "
34	30	O. D. +4.25 " " ⊃+0.50 " " 90° = 6/vi	" "
		O. S. +4.75 " " ⊃+0.50 " " 90° = 6/vi	" "
35	18	O. D. +1. " " ⊃+1.25 " " 90° = 6/iv	" "
		O. S. +1.50 " " ⊃+0.25 " " 90° = 6/iv	" "
36	24	O. D. +0.50 " " ⊃+1.25 " " 90° = 6/vii	" "
		O. S. +1.75 " " 90° = 6/vii	" "

No.	Age.	Refraction under Homatropin Hydrobromate.							Under Atropin Sulphate.	
37	15	O. D. +3.	D. Sph.	⊃+0.75	D. cy. ax.	110° = 6/vi	The same			
		O. S. +2.75	"	"	⊃+0.75	"	"	80° = 6/vi	"	"
38	19	O. D. +0.50	"	"	⊃+0.50	"	"	90° = 6/vi	"	"
		O. S. +1.	"	"	⊃+0.75	"	"	90° = 6/vi	"	"
39	13	O. D. +0.76	"	"				= 6/vi	"	"
		O. S. +1.	"	"				= 6/vi	"	"
40	19	O. D. +1.	"	"				= 6/vi	"	"
		O. S. +1.	"	"				= 6/vi	"	"
41	16	O. D. +1.	"	"	⊃+0.50	"	"	90° = 6/vi	"	"
		O. S. +1.	"	"	⊃+0.50	"	"	90° = 6/vi	"	"
42	14	O. D. +0.75	"	"	⊃+0.37	"	"	90° = 6/v	"	"
		O. S. +0.50	"	"	⊃+0.25	"	"	90° = 6/v	"	"
43	22	O. D. +2.	"	"				= 6/vi	"	"
		O. S. +2.	"	"				= 6/vi	"	"
44	11	O. D. +0.75	"	"				= 6/iv	"	"
		O. S. +0.75	"	"				= 6/iv	"	"
45	24	O. D. +1.25	"	"	⊃+0.25	"	"	90° = 6/vi	"	"
		O. S. +1.	"	"	⊃+0.50	"	"	90° = 6/v	"	"
46	23	O. D. +3.	"	"	⊃+1.50	"	"	90° = 6/vi	"	"
		O. S. +2.75	"	"	⊃+1.25	"		110° = 6/vi	"	"
47	23	O. D. +2.50	D. Sph.	⊃+0.75	D. cy. ax.	95° = 6/vi	"	"		
		O. S. +2.50	"	"	⊃+0.25	"	"	90° = 6/vi	"	"
48	27	O. D. +2.50	"	"	⊃+0.50	"	"	80° = 6/vi	"	"
		O. S. +1.50	"	"	⊃+0.50	"	"	105° = 6/vi	"	"
49	23	O. D. +1.75	"	"	⊃+0.25	"	"	115° = 6/vi	"	"
		O. S. +1.75	"	"	⊃+0.25	"	"	115° = 6/vi	"	"
50	22	O. D. +1.	"	"				= 6/vi	"	"
		O. S. +1.	"	"				= 6/vi	"	"
51	16	O. D. +2.25	"	"	⊃+0.37	"	"	90° = 6/iv	"	"
		O. S. +2.75	"	"	⊃+0.50	"	"	90° = 6/iv	"	"
52	21	O. D. -1.	"	"	⊂−2.50	"	"	90° = 6/xii	"	"
		O. S. −1.75	"	"	⊂−0.50	"	"	90° = 6/xii	"	"
53	25	O. D. +1.	"	"	⊃+0.50	"	"	180° = 6/iv	"	"
		O. S. −0.50	"	"	⊃+2.25	"	"	160° = 6/vi	"	"
54	18	O. D. +0.60	"	"				= 6/iv	"	"
		O. S. +0.90	"	"				= 6/iv	"	"
55	27	O. D. +0.25	"	"				30° = 6/vi	The same	
		O. S. +0.25	"	"				105° = 6/vi	"	"

REMARKS.—No. 2 refracted three months previously under duboisia with like result. No. 55 refracted under atropin three years previous to that under homatropin.

AN UNUSUAL VIBRATORY CICATRIX IN THE MEMBRANA TYMPANI.

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EDWARD B., aged thirty-eight, driver, was first seen at the Brooklyn Eye and Ear Hospital March 31, 1896, and examined at length the next day. He says that in childhood he had recurrent attacks of pain and discharge in both ears, which he attributes to bathing and diving; that, since then, he has had in both ears tinnitus and deafness, worse in the right ear until the last two years, during which the deafness has grown worse in the left ear. At present H. D. w. R. 3/60, L. ½/60; wh. and conv. R. ca. 24′, L. 18′. Tuning forks; from vertex, louder in the left ear; in the left ear, B. C. louder than A. C. for forks c and c″, for c‴ A. C. louder than B. C. The absolute duration of air conduction exceeds that of bone conduction for all three forks. In the right ear, A. C. louder and longer than B. C. all the way through the Hartmann series. Upper tone limit, as shown by the Galton whistle, 5.3 for right ear, 5.5 for left ear.

Right m. t.; malleus in normal position; the smaller, anterior half of m. t. present, and the seat of a medium-sized chalk deposit, and of a full-sized, but broken, light reflex, the larger, posterior half consists of a depressed, at one point, adherent, cicatrix. Left m. t.; great retraction, marked opacity, except of a small anterior inferior cicatrix: light reflex diffuse and dim. Both Eustachian tubes open freely to Politzerization,

The intranasal conditions are such, from moderately enlarged turbinateds on right side, and crest running along left side of septum, that under quiet conditions he can just succeed in breathing through the nose, but in case of any exertion, and probably to a considerable extent when sleeping, his breathing is largely oral.

The unusual part of the case is the behavior of the posterior cicatrix in the right membrane: Whenever the man speaks or swallows, but not with the pulse or respiration, there is very perceptible vibration of the upper half of this cicatrix. This vibration occurs with every sound of the voice, with the letters of the alphabet, as well as with words, the one thing noticeable in this connection being, what appears to me, the fact that there is a smaller vibration for the letters m, n, o, and r, than for the rest of the alphabet. The first part of the vibration is inward, followed by the rebound outward, and so on, indicating, it

seems to me, that the immediate effect of the phonation is in this case the formation of a partial vacuum in the tympanic cavity.

Is this phenomenon due to the physiological effect of phonation upon the air contained in the tympanum, or is it pathological? If it is pathological, and this seems to me the more probable explanation, then it is due to the existing, slightly obstructive, nasal condition, on the same principle that mouth-breathing is considered to tend always to the exhaustion of the air in the tympanum.

Viewed in this light it perhaps explains the symptoms about which I have recently been consulted by a gentleman, who, several days in the week, is obliged to do considerable public speaking. By evening of the days when he speaks most, he has an uncomfortable, stuffy feeling in the ears, from which feeling he is quite free on those days when he does no public speaking. This patient has also a very slightly obstructive nasal condition, not sufficient to cause mouth-breathing except after very considerable exertion. In both cases the treatment will consist of the re-establishment of free nasal respiration.

If any apology is necessary for bringing this case to the notice of the profession, I would offer a two-fold excuse, viz.: In the first place, while I, with probably many others, have seen cicatrices vibrate synchronously with the pulse, and with respiration, it was to me a novelty to see one affected by every sound of the voice; and in the second place, because it opens up a question, possibly physiological, but much more likely pathological, for our consideration, and may possibly be the means of explaining an occasional, otherwise obscure, case.

MEDICAL PROGRESS.

The Urology of Cataract.—As the result of an investigation covering a period of three years and involving 335 examinations in 259 cases of cataract of all kinds, except the traumatic variety, FRENKEL (*Lyon Médical*, 1896, No. 14, p. 466) found that the quantity of urine excreted in twenty-four hours by such patients under hospital regime in a state of either absolute or relative repose, presented a diminution greater than could be accounted for by the conditions of observation. The density of the urine approached in the mean that of persons with normal diuresis, thus indicating that the secretion of the urinary salts was diminished. It was further found that the elimination of urea was considerably diminished in most of the patients, and this diminution was due not only to the age of the patients, the alimentary regimen and the repose, but probably also in part to the diminution in the bodily metabolism. The elimination of the chlorids was found to be normal or exaggerated. The phosphates were diminished in some, normal in others, and increased in still others. Cases of cataract with phosphaturia were not very rare; they were less rare than cases with glycosuria, of which the proportion was 1.16 per cent. Neither the diabetes nor the cataract presented any special gravity, nor did special difficulty attend surgical intervention with antiseptic precautions. So-called physiologic albuminuria was found to be as common in cases of cataract as in any other group of individuals. Pathologic albuminuria was observed in a proportion of only 0.6 per cent. Peptonuria may be observed in cases of cataract, particularly in persons not kept in bed, but this condition bears no special relation to cataract.

A Fatal Case of Petroleum Poisoning in a Girl of Two Years.—JOHANNESSEN (*Berliner klinische Wochenschrift*, 1896, No. 15, p. 317) has reported the case of a girl, two years old, who, when seen several hours after swallowing an uncertain amount of ordinary coal oil, presented general pallor, with cyanosis of the lips, and difficulty of breathing. Consciousness was not lost, though blunted. The pupils were not dilated and reacted to light. The lips and tongue presented no peculiarity, while the tonsils appeared to be slightly swollen. The pulse was rapid and irregular, though the heart-sounds were distinct. Respiration was accelerated. The temperature was normal. Signs of rachitis were present. Introduction of the finger into the pharynx induced free vomiting; the vomitus contained, in addition to a little blood, a good deal of mucus, and smelled strongly of coal oil. The stomach was washed out through the tube and a half hour later vomiting was again induced. The pulse improved upon the subcutaneous injection of fifteen minims of camphorated oil, and the child appeared to improve. The bowels were evacuated by enema, the discharge emitting an odor of coal oil. Later, however, the child again became drowsy, the respiratory difficulty returned, the pulse became weaker and more irregular, and finally death ensued. Upon *post-mortem* examination, about an ounce of clear yellow fluid, smelling feebly of coal oil, was found in each pleural cavity; the serous membrane itself was smooth and free from ecchymoses. The lungs were somewhat edematous, the expressed fluid possessing a slight odor of coal oil. They were heavy and dark in color. The lower lobes and the adjacent parts of the upper lobes failed to crepitate, and portions sank in water. The glands at the root of the lung and surrounding the trachea, as well as some of the glands of the neck, were swollen but not cheesy. The cavities of the heart contained clotted blood, some of which extended into the large vessels. Peyer's patches and the solitary follicles were somewhat injected and swollen. The mesenteric glands were found to be enlarged and hyperplastic. The veins of the cerebral membranes were somewhat hyperemic. Otherwise no noteworthy changes could be detected.

The Treatment of Pneumonia with Guaiacol in Spray.—MALDARESCO (*Semaine Médicale*, 1896, No. 19, lxxiv) reports the results obtained in the treatment of more than one hundred cases of pneumonia by means of guaiacol employed as a spray upon the external surface. The use of the medicament is begun in antithermic doses as soon as the diagnosis is determined, the application being made to the posterior aspect of the thorax upon the affected side, and covered with a layer of absorbent cotton held in

place by a bandage. When the antipyretic effect has disappeared and the temperature has fallen to 38° C., (100.4° F.) the application is repeated at the end of three or four hours. This course is pursued until the temperature remains permanently at the normal. In mild cases, such a result is often obtained at the end of two days. When the apyrexia is established quinin is given in doses of four grains daily, in conjunction with alcohol. In the course of the treatment thus carried out, cough diminishes, expectoration becomes easy, and the sputum loses its viscosity and its rusty coloration. Favorable results were secured not only in cases of fibrinous pneumonia, but also in some of broncho-pneumonia. Care must be exercised in the treatment of the very young and the aged; in the former it is well to use a forty per cent. mixture of guaiacol with almond oil, and make the application successively upon the anterior, posterior, and lateral aspects of the chest.

The Application of Artificial Leukocytosis to the Treatment of Septic Puerperal Processes.—HOFBAUER (*Centralblatt fur Gynäkologie*, 1896, No. 17, p. 441) details a series of observations in which nuclein was employed to induce artificial leukocytosis in the treatment of a number of puerperal women suffering with septic processes, The action of the therapeutic agent proved prompt, and free from unpleasant manifestations. The administration by the mouth was followed by the appearance of nucleinic acid in the chyme. The effects of the treatment manifested themselves by improvement in both the general and the local conditions.

The Employment of Anti-streptococcus Serum in the Treatment of Scarlatina.—BAGINSKY (*Berliner klinische Wochenschrift*, 1896, No. 16, p. 340) reports the results secured in forty-eight cases of scarlatina between October, 1895, and March, 1896, in the course of which the anti-streptococcus serum of Marmorek was employed. In twenty-seven the course of the disease was unusually favorable, the majority recovering without complication. Only four were attended with suppurative otitis; one with mild nephritis; in two others severe anginas developed; in one case acute and painful glandular enlargement followed the injection, but recovery ultimately ensued. A striking feature in all was the rapid reduction of the temperature. It was further remarkable that in only two cases did severe anginal symptoms appear in the course of treatment with the injections. Ten cases in which such symptoms were present on admission terminated in speedy recovery. In exceptional cases albuminuria appeared, and in a single case nephritis with tube-casts, blood-corpuscles, etc. In a second group of cases of severe type the results were not so happy, although it is possible that in these the amount of serum employed was insufficient. It appeared, however, as though the cases were refractory to the therapeusis. In a third group of cases, five in number, the serum was employed only for the relief of complications arising late in the progress of the disease. In four of these cases the results were satisfactory; in one, complicated by ulcerative endocarditis, death ensued. Among the whole number of cases there were seven deaths, 14.6 per cent., as compared with percentages fluctuating between 22.6 and 34.4 in the years from 1890 to 1895. The mortality among cases treated with other means during the same epidemic as that in which the serum was employed was 24.9 per cent. The secondary manifestations attending the injections were similar to those observed in the sequence of injections of diphtheria antitoxin.

The Function of the Suprarenal Bodies.—As the result of an experimental study DUBOIS (*Archives de Physiologie*, April, 1896, No. 2, p. 412) arrives at the conclusion that the principal function of the suprarenal bodies is the destruction of toxins present in the circulation, and especially of the waste products of muscular activity and perhaps also those resulting from nervous activity. The glands do not appear to secrete any particular substance destined to be thrown into the circulation for the purpose of destroying or modifying noxious products constantly produced as a result of cellular activity, or gaining entrance from without. The cellular protoplasm of the capsules appears to possess a peculiar diastasic property not of a toxic nature which seems to be capable of exercising a modifying influence upon certain organic poisons, bacterial or otherwise, an influence requiring for its manifestation a certain period of time, and which may be exerted gradually. In the normal state the medullary zone contains alkaloids of intensely toxic activity, whose effects appear to be exerted especially upon the striped and unstriped muscular fibers. These alkaloids represent excrementitious matters whose retention is followed by the development of constitutional manifestations. They vary widely under different conditions.

THERAPEUTIC NOTE.

The Treatment of Pruritus Vulvæ.—While admitting that pruritus vulvæ may be purely a nervous manifestation, RUGE (*Berliner klinische Wochenschrift*, 1896, No. 18, p. 391) states that with the exception of a small number of cases in which some constitutional disorder existed, the pruritus in his experience was the result of local irritation, of disease of the external genitalia of the vagina and the portio vaginalis. The irritant is assumed to be of chemic or bacterial nature. In accordance with these views, success in treatment will depend upon the application of antiseptic principles. Without removal of the hair of the mons veneris, the vulva, vagina, portio vaginalis, and the cervix within reach of the finger are carefully soaped, without the use of a brush, and the vulva and vagina washed with mercuric-chlorid solution until rendered thoroughly aseptic. Then the affected parts are rubbed with a vaselin ointment of the same, in strength from three to five per cent. These procedures must be repeated every three or four days. The results obtained with this plan of treatment have been entirely satisfactory. A similar course may be advantageously employed in the treatment of recent gonorrhea in the female.

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SATURDAY, JUNE 27, 1896.

THE ANTITOXIN TREATMENT OF DIPHTHERIA.

No scientific question before the medical profession is of more vital interest at present than the determining of the real efficacy of antitoxin in the treatment of diphtheria. The serum treatment of disease is on trial, and on the verdict that shall now be given are centered the high hopes of scientific medicine. Resting on the well-grounded basis of the germ theory of disease there has been elaborated the most logical and theoretically perfect system of therapeusis. Its practical application under the searching eye of skilled observers in a few special hospitals of Europe demonstrated its usefulness to a sufficient degree to commend it to the profession for more extended trial.

Questions in therapeusis are notoriously complex and difficult of solution. So many varying factors enter into the problem such as the tendency of acute diseases to spontaneous recovery, the diversity in the resistance power of the individual, the uncertainity in diagnosis, the possibility of intercurrent infection, etc., that the most carefully formed decision is never absolutely impregnable. It behooves the investigator therefore to carefully weigh all factors of uncertainty and welcome all honest criticism as a help to final truth.

The most elaborate and searching discussion that the subject of antitoxin in diphtheria has received in this country was presented before the New York Academy of Medicine, occupying entire time of the two last meetings. This appeared in a most complete form in our last issue. The discussion was based upon observation and reports of the use of antitoxin in *hospital* practice. Next week we shall print in full the carefully revised, official report of the American Pediatric Association which comprises an analysis of several thousand cases reported from the *private* practice of over six hundred different physicians.

Such a broad field of observation under the conditions to which the practical use of any remedial agent must finally be subjected will render this report one of the most valuable pieces of evidence that can be submitted to any tribunal. On the conclusions thus deduced will doubtless rest the future, in this country at least, of the antitoxin treatment of diphtheria.

THE FORMALIN TREATMENT OF WOUNDS.

IF a watery solution of gelatin be allowed to dry in formalin vapor, the gelatin loses altogether its customary characteristics. It is no longer affected by hot or cold water, nor by steam, nor by acids, nor alkalies; and the formalin which has entered into combination with it is chemically inactive. Experiments upon animals, however, proves that by the action of the living tissues the combination is broken up and formalin set free. Further experiments upon pigeons and dogs revealed the fact that if formalin gelatin is ground to a fine powder, mixed with colonies of bacteria, (staphylococci, streptococci, chicken cholera) and introduced into the animal, the germs are unable to grow and the wounds heal without reaction.

This result is apparently due to the action of the freed formalin, an action which continues for some time—several hours probably—and therein lies an advantage of this new material over all the old antiseptic agents. Schleich (*Therapeut. Monatsch.*, February, 1896) asserts that with the help of this material every acute suppuration can

be stopped in twenty-four hours, and every wound can be made to heal aseptically without further trouble. He has proved this by its use in 120 cases of acute suppuration, 93 aseptic wounds, 4 compound fractures, and 2 deep wounds of the scalp. In his experiments the principles of aseptic surgery were in all respects observed, except as to the wounds, which were only mechanically cleansed and thoroughly rubbed with the powder. In every case suppuration was stopped in twenty-four hours, and even the compound fractures healed without any fever. In fresh wounds the powder made with the blood a firm aseptic scab.

In order to be of service the powder has to be brought into contact with sound or inflamed tissue. In the presence of necrotic masses, or in the specific inflammations of syphilis and tuberculosis, it has very little effect. In order to produce a continuous supply of formalin vapor for the treatment of ulcers, etc., it is possible to digest the formalin by a pepsin-hydrochloric acid solution. The formalin-gelatin powder is first dusted on the wound, and then covered with a compress wet in a watery solution containing five per cent. of pepsin and .3 per cent. of hydrochloric acid.

The powder is made by drying 500 grams of purified and dissolved gelatin in the vapor of 25 drops of formalin. The gelatin is then rubbed to a powder and preserved in the presence of a single drop of formalin solution.

THE COMMISSIONERS OF CHARITIES OF NEW YORK CITY, AND A SECRET CURE FOR DRUNKENNESS.

THE action of the Commissioners of Charities in setting apart two wards in Bellevue Hospital for the trial of a secret so-called "cure for drunkenness" is most deplorable. Not only is it inimical to the best interests of Bellevue Hospital and an unwarrantable affront to the medical profession, but it is the embodiment of a mistaken idea on the part of the Commissioners of Charities as to what their duties to the people are.

The owner of this so-called cure, a physician of this city, has tried for a number of years past, and, we believe, without material encouragement, to secure the approbation of physicians for a secret method of treating inebriety. It needs no explanation to show why such approbation has been withheld. One of the first principles which an individual who aspires to become an honest physician has thoroughly ingrained upon his conscience is that it is beneath his dignity as a man and inconsistent with his honesty as a physician, to withhold for personal and selfish gain any discovery which might be the means not only of mitigating the sufferings of the afflicted but of advancing the position of the profession of which he is a member. If his conscience becomes so blunted that this truism does not appeal to him, it is an unwritten as well as a written principle of ethics that he, by reason of such contemptuous acts, ceases to be a member of the profession in good standing, and that the honest members of the profession should disdain to have any intercourse whatever with such a person, or to make any use of the methods which appear to him of such intrinsic worth that he cannot afford to share them with the general profession.

Naturally, the individual who could resort to such quackish methods, would be extremely desirous of making his self-styled "wonderful discoveries" as well known to the undiscerning public, as possible, and in this instance no better scheme of bringing it before the public could have been concocted; for from the very first day the daily press has been filled with reports, apparently inspired, of the wonderful results which are obtained by the drink cure of Dr. ——— which is now being tried at Bellevue Hospital. Even after so short a time as three days, the superintendent of that institution, in the fulness of his therapeutic wisdom and diagnostic perspicaciousness, said to the reporters "It is the most wonderful thing I ever saw" and then his enthusiasm running away with him and becoming dramatic, he is reported to have said "it is a God-send."

To his eye the training of which has been obtained until a few weeks ago in a calling quite foreign to that of the medical profession, for he was a plumber, "the change in them is remarkable." To quote his own pithy sentence, "They look better, their eyes are brighter, and their step is not so slow."

The Commissioners of Charities who have done this overt act in this instance, we are informed, at the request of his Honor, the Mayor, are evi-

dently laboring under a mistaken conception of what their duties to the citizens of this city are. They are appointed that the charitable aims of the city may be carried out to the best advantage, and that those deserving of charity, the infirm, the incapacitated, and the sick shall derive the greatest benefit from it. It is not a part of their duty to make experiments or trials to discover the efficacy of therapeutic measures, of drugs, or of instruments. If it seems necessary to determine the value, or lack of value, of any medical measure for the benefit of the sick the proper persons to make such estimation are the visiting physicians, and not some outside person who may pray for the privilege.

It behooves the Committee of Inspection of Bellevue Hospital to lay aside the attitude of supine indifference and bring this matter clearly to the attention of the Commissioners. After they have done this commendably and without cavil, they should say to the honorable Commissioners that no secret measures, no measures protected by law, heralded though they may have been by some modern Mercury, approved of pontifically, and advocated by royalty, aristocracy, and plutocracy, have ever been the means of advancing the position of medical science one particle nor of ameliorating sickness or righting moral shortcomings.

If such enlightenment arouses in them a proper sense of their duties, they will at once put a stop to an experimentation which can only revert to the benefit of one—the worthy owner of an unworthy measure.

RESUME OF RECENT PROGRESS IN NEUROLOGY.

AT the recent meeting of the American Neurological Association two subjects of general interest were discussed: that of cerebral surgery, especially in its relations to epilepsy, and cerebritis. Great as were the expectations aroused at one time by the development of cerebral and cerebellar localization and its application by the surgeon to the removal of intracranial neoplasms, those who have had most to do with the subject have been gradually more appreciative of the defects in our present neurological knowledge and surgical methods. The discussion in Philadelphia only served to emphasize these. It is a matter of regret that the time allotted for debate was insufficient to permit of a full discussion. The truth is that we can only locate the cortical centers for the upper and lower extremities, the motor elements of speech, hearing, smell, perhaps also agraphia, while the localization of the other sensations and the different portions of the cerebellum is still open to doubt, and the site of the other mental faculties remains extremely uncertain. It is true that we can localize with remarkable accuracy at the base of the brain, the basal ganglia and the pons, but these structures are beyond the profitable reach of the surgeon's knife. Our information, therefore, although large, is by no means complete. Moreover, we have no means, before the operation, of differentiating between lesions of the cortex and the sublying white matter, and even at the operation a subcortical neoplasm can only be detected by probing with a needle, very often unsuccessfully; indeed, in one case, a well-known neurologist of this city never found the tumor until sections had been made of the brain after months of hardening, while the writer ran a needle three times (as was afterward demonstrated) through a round-celled sarcoma with a central cystic degeneration just below the cortex, and yet the surgeons could not find the growth, which came to view during careful *post-mortem* dissection. Multiple neoplasms may be present, too, as in a case of the writer's, where a melanoma was removed from the cortex of the cuneus without relief of the hemianopsia, because, as was shown by the necropsy a month later, there were several melanotic tumors throughout the optic radiations. To these obstacles there must be added another in cases of epilepsy, and that is the important question, whether the convulsions can be abolished by a successful removal of the lesion causing them. Many years ago the writer called attention to the fact that cases of epilepsy were reported as cured because the convulsions had been lessened in frequency or violence for short periods after resort to various operations and medicaments, evidently from the lack of appreciation by the reporter that much more favorable variations were frequently obtained spontaneously. In the writer's article in "Dercum's Text-book of Nervous Diseases" many cases are analyzed from this point

of view, to which number Mason has subsequently added others, showing that out of seventy patients only three were really cured in the sense that the attacks had ceased for three years after operation, while six were improved, fourteen were not improved, three died, one relapsed, two improved, but with bromids. The consensus of opinion at Philadelphia was in accordance with this view, although one speaker would have us take a standard of two years as sufficient to prove a cure; but it is difficult to perceive why we should do so. One gentleman made a curious suggestion that none but surgeons who had grown experienced and expert in cerebral surgery should ever operate. The question would fairly arise: How are operators to gain experience if they wait until they have obtained it? Notwithstanding these difficulties of the neurologist and the surgeon, however, there can be no question but what there will be a much more effective surgery of the future made possible by the constant advance in localization and in operative technic; and in the modern photography so unexpectedly afforded us by the Röntgen ray, and even in the immediate future we shall be greatly aided in this onward march by the skiagraphs of brain-tumors, which several gentlemen are already claiming to make.

Of greater interest to the physician was the very instructive paper of Putnam, upon "Hemorrhagic Cerebritis," and the ensuing discussion, which demonstrated, as has been shown by recent literature abroad, that cerebritis is a much more frequent disease than is generally supposed, and that it is very often clinically indistinguishable from meningitis, even the classical sign of retraction of the head being common to both affections.

LANDON CARTER GRAY, M.D.

ECHOES AND NEWS.

DR. HERMAN KNAPP, the well-known oculist of New York, narrowly escaped drowning at Monmouth Beach, N. J., last Saturday. He was only rescued by the prompt and heroic assistance of his daughter.

THE first death in Ward 33 at Bellevue Hospital, which was set apart recently for the treatment of chronic alcoholic cases with a secret preparation, was reported early this week.

A MEETING of the executive committee of the Mississippi Valley Medical Association was held at Atlanta, on May 6th, and the following gentlemen were appointed to deliver addresses: Dr. H. N. Moyer, Chicago, address on medicine; Dr. Horace H. Grant, Louisville, address on surgery. The indications are that the meeting to be held at St. Paul, on October 20th, 21st, 22d, and 23d, will be the largest and most successful in the history of the Association.

DR. HENRY P. WALCOTT of Boston, has been elected president of the Massachusetts Medical Society for the ensuing year.

THE AMERICAN SURGICAL ASSOCIATION, at its annual meeting at Detroit, elected Dr. J. Collins Warren of Boston, president.

DR. G. FRANK LYDSTON of Chicago, has a book in press entitled: "Over the Hookah; the Tales of a Talkative Doctor," that will present humerous and pathetic character sketches and studies.

THE BOWMAN LECTURE before the Ophthalmological Society of Great Britain, was recently delivered by Professor Snellen of Utrecht. His subject was "The Influence of Light on Vision."

THE PARIS FACULTY OF MEDICINE has caused Dr. Roger, chief of its pathological department, to resign because he had been indirectly engaged in the secret manufacture of anti-streptococcic serum. Dr. Marmorick of the Pasteur Institute, was the first to present the claims of this new remedy.

ADVICES received from Korosko, Egypt, announce that cholera has made its appearance among the Egyptian troops at that place. The dispatches say that fourteen cases of the disease were discovered in the camp, seven of which had resulted fatally up to the time of writing. The advices add that great fear is entertained that the disease will spread throughout the Soudan expedition.

HARVARD UNIVERSITY, on behalf of its Medical School, has filed a bill in the United States Court in Chicago against the Harvard Medical College of Chicago, seeking to enjoin the latter from the use of the name "Harvard," as being a fraud upon the University and the public.

M. METCHNIKOFF, M. Roux, and Salimbani, of the Pasteur Institute, have been so far successful in their endeavors to prepare a cholera antitoxin that, by its use, they can save many of the rabbits infected with cholera virus, while the control animals invariably die.

DR. HOWARD A. KELLY, in the *Johns Hopkins Hospital Bulletin*, has expressed his complete confidence in sterilizing of catgut with cumol. His approval was, in effect, that we now have a perfect method of sterilizing catgut with cumol, boiling at 155° centigrade, and we can use the gut with perfect freedom without fear of after-trouble. We are, therefore, almost as well off as if we used torsion; we simply add a little absorbable animal substance which disappears in a few days when it has done its work.

THE following letter from Jefferson to Jenner is copied from the *Brooklyn Medical Journal* for June. It shows how prompt Jefferson was to accept the new treatment. He and other members of his family personally practised the operation among their own connection and adherents:

MONTICELLO, Va., May 14, 1806.

SIR: I have received the copy of the evidence at large respecting the discovery of the vaccine inoculation, which you have been pleased to send me, and for which I return you my thanks. Having been among the early converts in this part of the globe to its efficacy, I took an early part in recommending it to my countrymen. I avail myself of this occasion to render you my portion of the tribute of gratitude due to you from the whole human family. Medicine has never before produced any single improvement of such utility. Harvey's discovery of the circulation of the blood was a beautiful addition to our knowledge of the ancient economy; but on a review of the practice of medicine before and since that epoch, I do not see any great amelioration which has been derived from that discovery. You have erased from the calendar of human afflictions one of its greatest. Yours is the comfortable reflection that mankind can never forget that you have lived; future nations will know by history only that the loathsome smallpox has existed, and by you has been extirpated. Accept the most fervent wishes for your health and happiness, and assurances of the greatest respect and consideration.

TH. JEFFERSON.

THE Berlin letter to the *Press and Circular* states that several changes in the personnel of the Institute have recently been effected. It is now just twenty years since the Institute was opened with two members—one for the medical and one for the veterinary department. Since then the number of members has steadily increased. There are now eight ordinary members, besides a number of associates. Another member is provided for, however, in next year's estimates, as the present staff is quite inadequate for the work demanded. The new member will undertake the department of public health, so far as it concerns food adulteration and offensive businesses. Dr. Josef Brandl, until recently at Munich, has been called to the new position, under the title of Regierungsrath, or Member of Council. He has for several years been Professor Tappeiner's assistant at the Pharmacological Institute at Munich.

ACCORDING to the *Medical Press and Circular* the coming scientific conventions in Germany will have many improvements in the Röntgen discovery laid before them. The latest news is that the apparatus has been so modified that a picture of the internal structures of the body can be thrown upon the fluorescent screen. The General Electrical Association announce from Berlin that it is possible, in this way, to demonstrate the internal structure of the head, larynx, and more especially the action of the respiratory organs and heart. If this be the case, it will simplify diagnosis of many organic lesions to a marvelous extent. Indeed, recent improvements in the new photography give promise of a future in scientific medicine that may be described as marvelous and revolutionary. Not the least remarkable feature of the matter is the lightning-like rapidity with which the whole subject of the X-rays has been investigated all over the world since the announcement of the discovery in the early part of the present year. It is announced that a practical demonstration of the fluorescent internal pictures will be made at the forthcoming surgical congress in Berlin.

BY order of Secretary Lamont, an examination into the physical condition of all army officers unfit for active service is being made. Those reported by the surgeon's certificate as permanently disqualified, may expect to be retired at once without reference to the usual age limit. It is said that this action was prompted by the small number of vacancies in the list and the want of places for the recent West Point graduates.

DR. PRIESTLEY has embodied in a report for the borough of Leicester, England, some interesting observations upon the earth's temperature and the prevalence of diarrheal diseases. Whenever the temperature of the earth, four feet below the surface, rises above 56° F., these intestinal affections become active, and the mortality tables for a fortnight later show them prominent among the causes of death. These results continue during the maintenance of this temperature and disappear after its subsidance.

ATTRACTED by the marked similarity, if not identity, of the bacillus of diphtheria and that found to exist in the nasal mucous membrane and its secretion in cases of ozena, certain Italian rhinologists have been led to try injections of the antitoxin in these heretofore intractable cases. The result in some thirty or forty patients has been quite unexpectedly gratifying. Of a series of thirty-two such cases, sixteen seemed radically cured, seven gave every promise of recovery, five were improved, and the remainder uncertain. The injection of ten cubic centimeters every day, or every second day, is usually followed by an immediate diminution in the odor and the amount of scabbing, while the secretion becomes more fluid and abundant. Duration of the treatment must vary with the exigencies of the individual case. Although it is entirely too early to regard such evidence as at all conclusive, especially when dealing with a disease so resistantly chronic, the theory underlying the experiment appears to be based upon a possible bacteriological relationship which would justify further investigation.

A NOVEL method of taking skiagraphs of the stomach is suggested by Dr. Hemmeter of Baltimore, in the last number of the *Boston Med. and Surg. Journal.* It was discovered by Röntgen, not only that metallic lead was quite opaque to the X-rays, but also the solution of its salts. The toxic effects of these prohibit their use as a means of distending the organ, but this objection is overcome by Dr. Hemmeter's proposition to first introduce a very thin and elastic rubber bag, which may afterward be filled with the solution and the picture taken.

A MACHINE has been invented by a Swedish engineer which will transform sterilized milk into butter in one

minute. Not only is time saved, but the butter is made absolutely pure and free from germs. The milk is heated in the sterilizer to 160° F. From the sterilizer it runs into a churning chamber, where it is cooled down to 60° in its progress, by means of very small cooling frames, through which iced water constantly passes, and which revolves with the churning chamber at the rate of six thousand revolutions a minute. Several advantages are claimed for this remarkable machine, which bids fair to create a revolution in butter-making upon a large scale. In the first place, by sterilizing the milk, disease germs, if they are in it, are destroyed, as well as the microbes which cause putrefaction of the butter. The process of buttermaking is so rapid that there is very little chance of any germs that may exist in the atmosphere of the dairy getting into the butter, especially as all, or nearly all, air must be forced out of the chamber of the machine by the extreme rapidity of the movement going on inside. When the butter is once pressed, the possibility of germ impregnation is almost eliminated. Thus, a wholesome and permanently pure butter is produced. Another advantage is that milk can be converted into butter directly after being obtained from the cow.

A VERDICT was given against a gold-cure in Boston last week. It seems that the proprietors quarreled. The one who had furnished the capital—$5000—wished to recover this amount because he claimed it had been fraudulently obtained. The member who was expected to furnish the experience had promised that the business should be successful and that at least a majority of the patients should be cured. It was abundantly proven that this part of the contract had not been kept, and hence the court sustained the claims of the party of the first part.

DR. ROGER S. TRACY, registrar of vital statistics, reports that for the week ended at noon, June 20th, there were 758 deaths in the city, of which 333 were cases of children under four years.

CORRESPONDENCE.

To the Editor of THE MEDICAL NEWS.

DEAR SIR: In the *Journal of the American Medical Association* there is a paragraph, "A Recruit for Achilles Rose," telling that Dr. Loeffler of Dresden, Germany, writes his prescriptions in Greek characters. With all due respect for Dr. Loeffler, one of the prominent German physicians, I wish to say that he is like some Catholics, who are more Catholic than the Pope. The Greeks themselves write their prescriptions as the physicians of other countries do, in Latin, with Latin characters, only the directions are, as a matter of course, written in Greek. Dr. Loeffler's idea, however, is an excellent one, and we might write our ordinations in Greek for the same reason for which the Greeks write them in Latin, namely, that the public should not read them.

Yours,

A. ROSE.

NEW YORK,
June 16th.

REVIEWS.

MANUAL OF MEDICAL JURISPRUDENCE AND TOXICOLOGY. By HENRY C. CHAPMAN, M.D., Professor Institutes of Medicine and Medical Jurisprudence, Jefferson Medical College. Second edition, 254 pages, 35 illustrations, 3 colored plates. Philadelphia: W. B. Saunders, Publisher.

IN many respects this volume of about 250 pages constitutes a most valuable addition to the working library of the general practitioner. It is essentially and very desirably practical, containing an abundance of material gathered from the everyday experience of one who is thoroughly familiar with most of his subject. Unfortunately, the author has overstepped in one sub-field the domain of personal knowledge, the chapter upon insanity, in its medico-legal aspects, indicating a most pitiable lack of information. Insanities, for example, are classified under three groups: amentia, mania, and dementia. Paranoia is not recognized, nor is the word mentioned, while melancholia the author describes as "a variety of mania." The paragraph upon homicidal mania is dangerously misleading in several statements, in that the author leaves the inference that homicidal impulses are found in one variety of insanity only, that there is characteristically entire absence of motive, and that no effort is made in such cases to escape detection or punishment. As this chapter was present in the first edition, it is difficult to conceive how it ever appeared in a second edition unchanged, a fact to be especially regretted, as it seriously mars an otherwise exceedingly creditable work.

AN INTRODUCTION TO PATHOLOGY AND MORBID ANATOMY. By T. HENRY GREEN, M.D., F.R.C.P. Seventh American from the Eighth English Edition. Revised and enlarged by H. Montague Murray, M.D., F.R.C.P. Illustrated by 224 engravings. Philadelphia: Lea Brothers & Co., 1895.

THE most active workers in the whole domain of medical science are unquestionably the pathologists. Through their unflagging zeal discoveries are added to discoveries with such great rapidity that even the most advanced textbooks are antiquated before they have reached the age of a lustrum.

No one could deny that the previous edition of Green's Pathology, though fully abreast of the progress in its subject at the time of publication, was no longer adequate to the needs of the student.

It is, therefore, meritorious on the part of the editor and the publishers to bring out another edition. The present one—which is the seventh American from the eighth English edition—has been carefully revised by H. Montague Murray, and takes account of nearly all the important advances in pathologic science. To select only one or two subjects we find for example, that the etiology of carcinoma is discussed with conciseness and impartiality, the editor very properly concluding that the parasitic nature of the cell-inclosures must still be considered as being *sub judice*. The chapter on diseases of the nervous sys-

tem is good, and the illustrations in it are well chosen. The article on inflammation has not been greatly modified, and reference to the rather important subject of chemotaxis is omitted. The infectious granulomata are treated with thoroughness, both from the bacteriologic and the anatomic standpoint. The editor has succeeded admirably in preserving the clearness of diction for which Green's Pathology has always been noted, and which makes the reading of the book so pleasant.

SYPHILIS IN THE MIDDLE AGES AND MODERN TIMES, being Vols. II and III of "Syphilis To-day and Among the Ancients." By DR. BURET, Paris. Translated from the French by A. H. Ohmann-Dumesnil, M.D.

Vol. II, "Syphilis in the Middle Ages," a historical sketch, essays to expound, by "scientific documents" and "historical and literary documents," in chapters 1 and 2 the pre-Columbian existence of syphilis. This the author accomplishes by narrating a string of indecent excerpts relating to the licentiousness of this era. He considers this stirring up of much filth "indispensable"

The remaining chapters of this volume discuss the relation of syphilis to the various epidemics, notably the epidemic of Naples, and are devoted to the same purpose—that of establishing the medieval existence of syphilis and of disproving its American origin.

Vol. III, "Syphilis in Modern Times," traces the history of syphilis and the growth in its treatment from the Middle Ages down to the present time.

The general tone of this work, whether intended so or not, is distinctly sensational.

VOICE BUILDING AND TONE PLACING. By H. HOLBROOK CURTIS, M.D. D. Appleton & Co., New York.

THE most interesting part of this book, from a medical standpoint, is found in chapters VI and VII, the origin of certain diseased conditions of the vocal cords produced by improper use of the voice, "Nodules of Attrition," alias "Corns of the Vocal Cords," alias "*Betes Noires* of Artists." The author gives slight attention to the pathology or nature of these, but devotes some space to their etiology.

The etiology is based upon the supposition that the vocal cords while vibrating act like reeds. Much energy and space is devoted to prove that they act in this manner, and many diagrams are given to illustrate the motion of the cords while vibrating, and the author goes into a detailed description of the stroboscope, by means of which he has seen the cords do all these things. Now, if the vibrating cord is segmented after the manner of reeds, we will have the same arrangement of partial tones in the voice that we have in the reed; because it is the segmentation of the cord while vibrating that gives partial tones. By means of properly tuned resonators one is able to pick out the partial tones of the voice, or any other musical sound. The first overtone of the voice is the octave produced by the cord vibrating in two equal segments. The second overtone, the fifth of the first octave produced by three equal vibrating segments. The third overtone, the octave produced by four segments. The fourth overtone, the third of the second octave produced by five segments. The fifth overtone, the fifth of the second octave produced by six segments. The sixth overtone, the minor seventh of the second octave produced by seven segments, and the seventh overtone the third octave, produced by eight segments. Now the overtones of a reed do not lie in this series. The first overtone of a reed lies between the sixth and seventh partial tones of the voice; hence we have five overtones in the voice before we come to the first overtone of the reed. These five overtones are the most important in determining the quality of the voice. Recent investigations have demonstrated that when the lower partial tones are weak, we get the disagreeable quality of twang which is known as "reedy"; if we examine the overtone of a string, we find that it has precisely the same relation to the fundamental that the overtones of the voice do, and we are forced to conclude that the vibrating cord acts like a string and not like a reed. Again, we find the same factors brought into use in raising the pitch in both the cord and the string *i.e.*, length, weight, and degree of tension. By the proper mechanism we can change the length, weight, and amount of tension of the vibrating cord, just as we find different lengths, weights, and degrees of tension in stringed instruments. The conditions which determine the pitch of the reed are length, weight, and rigidity (elasticity). The cord, like the string, is attached at both ends, and is thus capable of being subjected to different degrees of tension, while the reed is free at one end, and tension has nothing to do with its pitch.

On page 144, Fig. 38, Dr. Curtis gives us an illustration of the first stage in the development of these "nodules." Anyone who has ever seen the vocal cords in action, or who understands the anatomy of the larynx, would know that this is an impossible position of the cords. There is no possible means of getting a separation of the anterior attachments of the cords while they are approximated in the middle. As the reed theory, on which the author depended to substantiate this position (see p. 124), has been exploded, there is nothing left to fall back upon. Figs. 39 and 40 can only be interpreted as examples of tumors of the vocal cords, which nothing but surgical interference could remove.

It is ridiculous to suppose, in the first place, that anything resembling the structure of a corn could form on the vocal cords, and in the second place, if it had been formed, it would be impossible to remove it in a few hours, or a few days even, as the author claims to do by simple tone exercises. Fig. 41 is an impossible position of the cords, as their front attachments are separated. Fig. 42 shows a paresis of the intrinsic muscles.

Chapter VI is a very troublesome one. It contains among other things the author's theory of registers, which, to say the least, is peculiar. On page 132 there is a diagram to illustrate that there is no segmentation of the cord in the chest register. On page 133 diagrams illustrating the segmentation of the cords in the head register. The truth is that there is far more segmentation of the cord in the lower than the higher tones. The higher the pitch the fewer partial tones, and these partial tones are dependent on segmentation of the cord. On page 134

we read "The vocal cord is thus divided into two unequal segments." This never happens, as the relations of our partial tones would then be disturbed, but they are always the same. Space forbids a detailed criticism of his treatment of registers. Suffice it to say that with the proper mechanism all the changes necessary to produce any pitch are brought about by the simultaneous action of the muscles: the crico-thyroid, which gives the degree of tension required and the thyro-aritenoideus which produces the shortening and the lessening of the weight of the vibrating cord. These muscles act through the whole range of the voice, therefore there is no change in mechanism and no registers. Registers only occur in bad productions.

On page 116 occurs the passage, "The tones are not always the result of the vibration of the cords themselves, but of the vibration of air columns in the vocal tube and resonating cavities." This is an impossibility, as the vocal cords originate all the vibrations. These resonance cavities can only reinforce or eliminate certain partial tones, and it is the use of the resonance cavities in this way which enables us to articulate. The vocal cords originate the same series of vowels, and the size and shape of the resonance cavities determine which series of waves shall be reinforced, and which shall be suppressed, thus determining the vowel sound. This same error is made on page 83 in regard to the sounding boards of instruments. Sounding boards only reinforce, they do not originate tone.

Chapter III is devoted to breathing. The author decides that the high chest position, combined with inferior cortal breathing, is the correct thing. He bases this decision on the supposition that the high chest position gives a large amount of chest resonance, thereby adding greatly to the carrying power and strength of the tone. We believe that the essential feature of the resonator is a free communication with the external air. The chest, while a tone is being produced, is a closed cavity, therefore it cannot act as a resonator to reinforce the tone, and chest resonance is absurd. It is true that the air in the chest vibrates, but these vibrations cannot get out to create a disturbance in the external air. The only cavities which can reinforce tone are the pharynx, nose, and mouth. The author states, page 73, that the antra, and sphenoidal and frontal sinusus are important resonance cavities. This is not true, as they are practically closed cavities, as far as free communication with the external air is concerned.

Chapter II, treats of the anatomy and physiology of the larynx. On page 42 is found "The strength of the expiratory blast effects the pitch of the tone." This is not true, as the strength of the blast determines the intensity of the tone only. On page 95, is this statement. "A simple fundamental tone is not known in music," on page 88, "In an organ each pipe is constructed so as to give only its fundamental note" (tone). On page 95, the author speaks of "undertones" phenomena unknown to authorities in physics. On page 96, "The fact that the fundamental tone sets the air into secondary vibrations can be shown." The fundamental as well as the overtones are produced by the vibrator. One set of air waves cannot originate another set. On page 101, "The same conditions for the production of overtones exist in the reed as in string instruments." We have just shown that the same conditions do not exist, and that their overtones are very different. The first overtone of the reed is between the fifth and the sixth of the string. The second, between the sixth and seventh of the string. The third, between the thirty-third and thirty-fourth of the string, and the fourth, between the fifty-fifth and fifty-sixth of the string. On page 144, he refers to the "longitudinal vibrations of the vocal cords," a physical impossibility. On page 155, "After the experience with the correct focus of tone, etc." When we consider that the sound waves of C2 are about nine feet long, and C5, its seventh overtone, about one foot long, it is a little difficult to see how these waves, which are originated by the vocal cords, can be focused "dans le masque." On the same page, "These are the experiences, so much appreciated by singers, that we employ for the reduction of nodules of attrition on the cords, which exercises, strange to say, have been the subject of ridicule by certain laryngologists, who have undoubtedly not given the subject of physics a proper amount of consideration."

We have seen that the "nodules" are a myth, or at least nothing more serious than collections of mucus, which are readily thrown off by vibration of the cords. On page 55, "We are indebted to the stroboscope for the scientific vindications of our theory and treatment of singers' nodules." The stroboscope, instead of vindicating his theory of nodules, has led him sadly astray. Finally, Chapter IX, is devoted to voice figures. These diagrams simply illustrate the vibration of plates and membranes, and have nothing whatever to do with the voice.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM MAY 26, 1896, TO JUNE 1, 1896.

Leave of absence for four months on surgeon's certificate of disability, is granted to First Lieutenant Benjamin Brooke, assistant surgeon.

The order assigning Captain Ashton B. Heyl, assistant surgeon, to duty at Fort Canby, Washington, is revoked; he is relieved from duty at Fort Thomas, Kentucky, and ordered to Fort Riley, Kansas, for duty, relieving Captain Thomas V. Raymond, assistant surgeon. Captain Raymond, on being thus relieved, is ordered to Fort Canby, Washington, for duty,

OFFICIAL LIST OF THE CHANGES OF STATION AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE HOSPITAL SERVICE FOR THE SIXTEEN DAYS ENDED MAY 31, 1896.

HAMILTON, J. B., surgeon, granted leave of absence for ten days, May 23, 1896.

BROWN, B. W., passed assistant surgeon, granted leave of absence for six days, May 25, 1896.

GARDNER, C. H., assistant surgeon, ordered to examination for promotion, May 27, 1896.

BOARDS CONVENED.

Board convened to meet in Washington, D. C., June 15, 1896, for the examination of officers for promotion and candidates for appointment in service. Surgeon G.W. Stoner, chairman; Surgeon Fairfax Irwin, Passed Assistant Surgeon C. E. Banks, recorder, May 25, 1896.

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UNIV. OF MICH.
29 JUN 1896

MEDICAL NEWS.

A WEEKLY MEDICAL JOURNAL.

Vol. LXVIII. No. 26.
Whole No. 1224.

NEW YORK, SATURDAY, JUNE 27, 1896.

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Contents.

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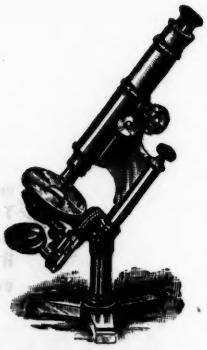

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Fig. 2.

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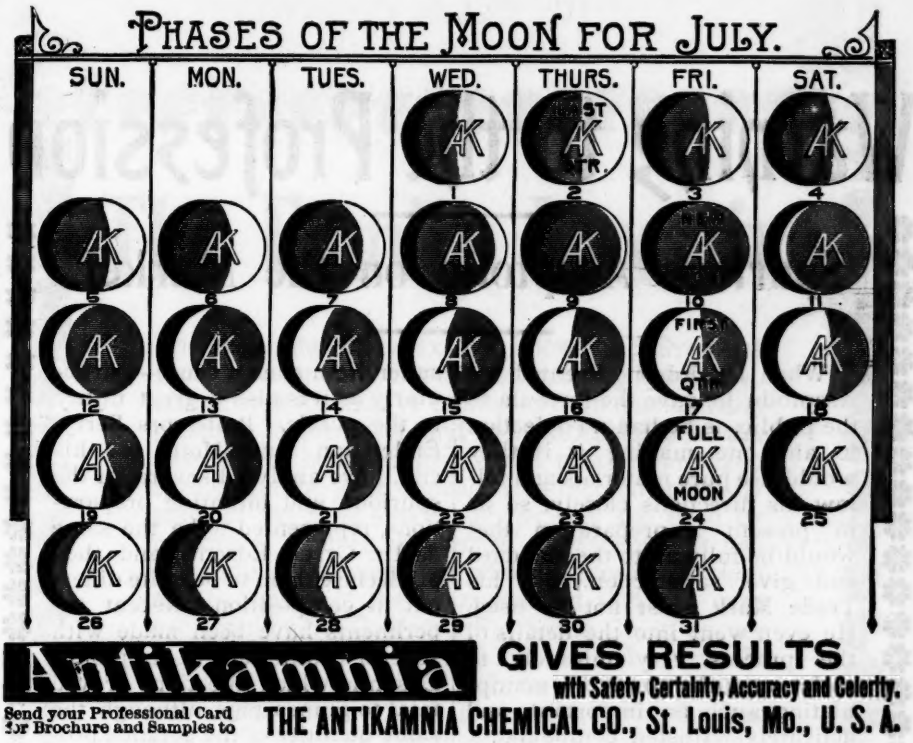

EUROPEAN ENDORSEMENTS.

The *London Lancet* of March 28, 1896, says, editorially:—"Antikamnia is well spoken of as an analgesic and antipyretic in the treatment of neuralgia, rheumatism, etc., etc. It is not disagreeable to take, and may be had either in powder or tablet form, the latter being made in five-grain size. It is described as not a preventive of, but rather as affording relief to, existent pain. By the presence in it of the amine group it appears to exert a stimulating rather than a depressing action on the nerve centers and the system generally. If this be so, it possesses advantages over other coal-tar products."

The concise endorsement of the *Edinburgh Medical Journal*, which appeared in the January issue, is equally interesting.—"This is one of the many coal-tar products which have lately been introduced into medicine in Scotland. In doses of three to ten grains, antikamnia appears to act as a speedy and effective antipyretic and analgesic."

THE MAINSPRING OF SUCCESS.

Belcher Hyde, M.D., of Brooklyn, N. Y., writes: "Antikamnia is an American product, and conspicuous on this account and because of the immense popularity which it has achieved. The literature is voluminous, and clinical reports from prominent medical men in all parts of this country, with society proceedings and editorial references, attest its value in actual practice in an endless variety of diseases and symptomatic affections, such as neuralgia and rheumatism in all forms, typhoid and malarial fevers, headache and other neuroses, influenza and allied complaints, pain due to irregularities of menstruation, etc. The fact stands incontrovertible that antikamnia has proven an excellent and reliable remedy, and when a physician is satisfied with the effects achieved he usually holds fast to the product. This is the secret and mainspring of the antikamnia success."—*New Drugs.*

DYSMENORRHEA AND ITS TREATMENT.

G. C. Chapman, M.D., Birmingham, Ala., in an able and comprehensive paper under the above caption says:—"The treatment may be divided into that which is most appropriate for the relief of the pain at the *time* of the flow, and that which is best suited for the interval between menstruation, and to *preventive* measures. Upon the latter, in my judgment, much depends for the safety of humanity in the future.

"The *active* treatment, or that which is best used at the time of the flow, may be divided into local and constitutional, and consists of rest in bed, hot vaginal douches, and hot applications over the lower abdomen and to the extremities.

"In the way of medicines, a great many remedies have been employed for the relief of the menstrual pain, but reference will here be made only to a few that have proved serviceable to me. In the neuralgic form, cimicifuga has proved very effective, together with the salicylates if the flow is scanty and of a rheumatic type. Five-grain doses of antikamnia in whisky, repeated every five minutes until twenty grain have been given, will always bring relief."—*American Medical Compend.*

FROM the *Universal Medical Journal*, edited by Charles E. Sajous, A.M., M.D., of Paris, France, and which, in conjunction with *The Annual of the University Medical Sciences*, under the same editorial control, represents the very acme of modern medical thought and development, we clip the following, which best tells its own story in a few terse, pointed, and concise testimonies:

"In these days of improvement and constant surprises in the way of new inventions, it is rather strong language to say when anything appears that 'there is nothing better.' But, for certain affections, antikamnia, with its various combinations, appears to give perfect satisfaction, as the following communications indicate:

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"J. H. Gross, M.D., Athens, Ga.: 'Its use in proper cases is not surpassed by any known remedy.'

"J. E. Root, M.D., Hartford, Conn.: 'I have used antikamnia since its first appearance, and it is the only member of the coal-tar series that I now use, for it covers all cases requiring an analgesic and antipyretic.'"

Warning to the Profession

Spurious Aseptolin on the Market.

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The large demand, however, for this preparation, which has been supplied by the Whitehall Chemical Co.'s Laboratory (and sold by them through the Equitable Chemical Company, 30 Reade Street, New York City), working under the Doctor's supervision and which furnished the samples for all the preliminary tests, has induced a number of parties to place imitations upon the market, many of which produce very unsatisfactory and dangerous results, much to the injury of Dr. Edson's reputation, which he cannot permit to suffer from such a cause—particularly as it is also a great injury to the public. Professors Berry, Endemann, and Mott, of this city, have analyzed several of the spurious and imitation preparations, represented to be the same as Dr. Cyrus Edson's, and they all declare them to be quite different in composition. Recent experiments have been made with several counterfeits of Aseptolin-Edson in which injections proved fatal to guinea-pigs, although the same quantity of the genuine produced no ill effects.

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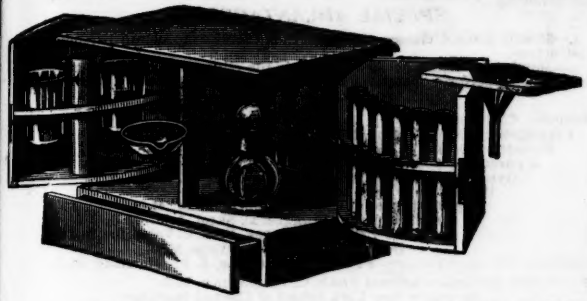

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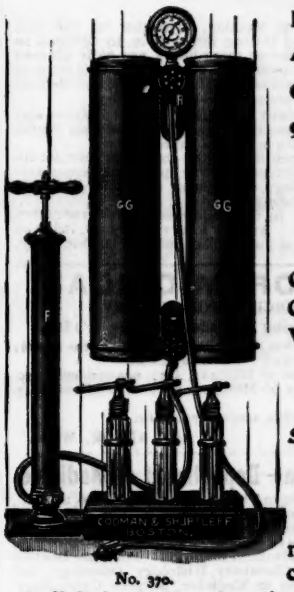

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